

REMARKS

Claims 1 to 10 are pending in the application. The indication that claims 3, 8 and 10 are drawn to allowable subject matter is noted with appreciation. Claims 3, 8 and 10 have been amended to be in independent form, incorporating all of the limitations of the base claim and any intervening claims and, therefore, as amended, claims 3, 8 and 10 are in condition for immediate allowance. In addition claims 1 and 6 have been amended to more particularly recite a specific feature of the invention. Claim 2 has been amended to correct a typographical error, and claim 9, which dependent on claim 6, has been amended to reflect the amendment to claim 6.

Claims 1 and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,431,676 to Asauchi et al. in view of U.S. Patent No. 6,345,875 to Fuller et al. Claims 1 and 6 have been amended to more particularly distinguish the present invention from the combination of Asauchi et al. and Fuller et al. As amended, it is believed that claims 1 and 6 patentably define over the references.

More specifically, claims 1 and 6 have been amended to recite the feature “the ejection data being generated fro each of specific lines selected from the plurality of lines based on predetermined criteris, the timing control data being generated for each of the plurality of lines”. The ejection data is generated and transferred based on the predetermined criteria, which is described on page 19, lines 14–23, in the specification, for example. It is submitted that no reference, alone or in combination, show or even suggest this feature. According to the present invention, ink droplets can be ejected highly precisely onto target positions without increasing the amount of data required for this precision.

At the Interview which took place on February 8, 2006, with Examiner Fidler and Examiner Feggins, the patent to Asauchi et al. was distinguished, and the substance of that interview was made of record in the amendment filed March 8, 2006, which is incorporated herein by reference. The original rejection of the claims was under 35 U.S.C. §102(b) as being anticipated by the patent to Asauchi et al. The Examiner now combines Fuller et al. (newly cited in this Office

Action) with Asauchi et al. In doing so, the Examiner states that Asauchi et al. do not teach “the data generating unit generates timing control data from pattern data; the drive-waveform-generation signal is generated in accordance with timing control data; and the transfer signal generating unit generates a transfer signal in accordance with the timing control data.” The Examiner relies on Fuller et al., citing col. 4, lines 27–35, for a teaching of timing specifications, and col. 4, lines 35–58, for a teaching of a drive-waveform-generation signal generated in accordance with timing control data and a transfer signal generating unit which generates a transfer signal in accordance with the timing control data. It is respectfully submitted that the general description of the timer processing unit 36 of the controller 300 in the cited passages of Fuller et al. do not suggest the specifically recited limitations in claims 1 and 6.

The disclosed and claimed invention relates to a patterning device used for manufacturing liquid crystal displays and the like. The patterning device includes an ejecting device located in an assembly line and a controller located at a separate place outside of the assembly line. That is, data need to be transferred over a long distance. Further, the ejecting device needs to eject a large area and also in high resolutions (refer to page 1, line 25, to page 2, line 13, of the specification). Accordingly, the amount of data becomes too large using conventional methods, and data transfer from the controller to the ejecting device is a problem.

To solve this problem, according to the present invention,

- (i) the controller compresses pattern data in a specific format; and
- (ii) the ejecting device performs ejection based on the pattern data compressed in the specific format.

With such a configuration, the ejection device (located at a separate place from the controller) can perform ejection without expanding the compressed pattern data. Thus, highly accurate ejection can be performed in a simple configuration. Neither of the references to Asauchi et al. nor Fuller et al. show or suggest the concept of compressing pattern data for transferring data efficiently, as described above.

Claims 2 and 7 were rejected under 35 U.S.C. §103(a) as being unpatentable over the patents to Asauchi et al. and Fuller et al., further in view of

U.S. Patent No. 6,758,550 to Ito et al. Claim 2 is dependent on claim 1, and claim 7 is dependent on claim 6. As such, these claims are believed to be patentable over the prior art for the same reasons advanced with respect to the base claims 1 and 6.

In the Office Action (page 5, lines 1-9), the Examiner takes the position that Ito et al. (col. 20, lines 7-9) show the feature "the plurality of lines has an interval in the first direction that is smaller than a minimum ejection frequency of each of the multiple nozzles" as recited in claims 2 and 7. However, this part of the reference to Ito et al. only shows "the layout pitch of the nozzles 27" and "the pitch of the filter element (or pixel)", but does not show or even suggest the above feature. This feature of the present invention is described on page 16, line 16, to page 17, line 15, in the specification and shown in Fig. 5(2).

Claims 4, 5 and 9 were rejected under 35 U.S.C. §103(a) as being unpatentable over the patents to Asauchi et al. and Fuller et al., further in view of U.S. Patent No. 6,749,279 to Kobayashi et al. This rejection is respectfully traversed for the reason that the combination of Asauchi et al, Fuller et al. and Kobayashi et al. does not teach or otherwise suggest the claimed invention.

Claims 4 and 5 are either directly or indirectly dependent on claim 1, and claim 9 is directly dependent on claim 6. These claims are believed to be patentable over the prior art for the reasons advanced above with respect to claims 1 and 6, as amended. The addition of the patent to Kobayashi et al. does not overcome that basic lack of teaching of the invention as recited in claims 1 and 6, as amended.

In view of the foregoing, it is respectfully requested that the application be reconsidered, that claims 1, 2, 4 to 7, and 9 be allowed together with claims 3, 8 and 10, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any

overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael E. Whitham".

Michael E. Whitham
Reg. No. 32,635

Whitham, Curtis & Christofferson, P.C.
11491 Sunset Hills Road, Suite 340
Reston, VA 20190

Tel. (703) 787-9400
Fax. (703) 787-7557

Customer No.: 30743